Listing of the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (**Original**) A method for producing a microchannel chip, comprising the steps of:
   a) shielding a surface of a substrate, on which a groove-like channel has been formed, with a mask that exposes the channel,
   b) forming a polymer membrane on the exposed surface of the substrate; and
   c) laminating a cover material on to the substrate surface on which the channel has been formed.
2. (**Previously presented**) The method of claim 1 further comprising the step of forming a polymer membrane on the side of the cover material surface that will be laminated to the substrate.
3. (**Original**) The method for producing the microchannel chip of claim 2, wherein when a polymer membrane is formed on the side of the cover material surface that will be laminated to the substrate, the polymer membrane is formed on an exposed surface of the cover material by shielding the cover material surface with a mask, the exposed area of which is partially or entirely identical in shape to the mask for the substrate.
4. (**Previously presented**) The method of claim 1, wherein the polymer membrane formed on the exposed substrate surface is:
   (a) a plasma-polymerized membrane formed by plasma polymerizing a plasma-polymerizable monomer on the substrate surface,
   (b) a surface-polymerized membrane formed by polymerizing a polymerizable monomer on the substrate surface, or
   (c) a polymer-bound membrane formed by binding a polymer compound onto the substrate surface.
5. (**Previously presented**) The method of claim 1, wherein the polymer membrane formed on the exposed substrate surface is a plasma-polymerized membrane.
6. (**Previously presented**) The method of claim 2, wherein the polymer membrane formed on the side of the cover material surface is:

(a) a plasma-polymerized membrane formed by plasma polymerizing a plasma-polymerizable monomer on the cover material surface,

(b) a surface-polymerized membrane formed by polymerizing a polymerizable monomer on the cover material surface, or

(c) a polymer-bound membrane formed by binding a polymer compound onto the cover material surface.

7. (**Previously presented**) The method of claim 2, wherein the polymer membrane formed on the side of the cover material surface is a plasma-polymerized membrane.

8. (**Previously presented**) The method of claim 2, wherein the polymer membrane formed on the exposed substrate surface and the polymer membrane formed on the side of the cover material surface are identical polymer membranes.

9. (**Previously presented**) The method of claim 1, wherein the lamination is performed by pressure bonding or thermocompression bonding.

10. (**Previously presented**) The method of claim 1, wherein at least either one of the substrate or the cover material is a plastic.

11. (**Previously presented**) The method of claim 1, wherein the substrate and the cover material are plastics.

12. (**Original**) The method of claim 11, wherein both the substrate and the cover material are a thermoplastic resin, and the laminating process comprises a method in which the substrate and the cover material are attached by thermocompression bonding.

13. (**Original**) The method of claim 12, wherein thermocompression bonding is performed at 200°C or less.

14. (**Original**) The method of claim 10, wherein one of the substrate or the cover material is a silicon resin, and the other is a glass or a plastic, and the laminating process comprises a method in which the substrate and the cover material are attached by pressure bonding.

15. (**Previously presented**) The method of claim 1, wherein the mask is either a photoresist-mask or a metal mask.

16 - 23. (**Canceled**)

24. (**Previously presented**) The method of claim 2, wherein the mask is either a photoresist-mask or a metal mask.